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Commentary

Defining 'Good Enough' Architecture

The design goal of enterprise architecture should be internal malleability, providing business and technical agility. "Good enough" architecture aims to achieve these goals.

As we have been developing our architecture models and working with our clients on their use, we have been developing a set of architecture principles that we have termed "good enough" architecture. Good enough architecture is meant to be in contrast to the "perfect architecture." Our philosophy is that creating an agile architecture, one that is easily changed over its life to accommodate changes in business models and technology, is more important than an architecture that is "bulletproof," or that represents an ultimate vision. Architectures need to be malleable, rather than perfect. Here, we describe the recipe for a good enough architecture.

Design Goals of a Good Enough Architecture

There are three principles:

- Be flexible. This flexibility can be built in by working with Gartner's architecture model, specifically by separating the four domains (business relationship grid, business processes and styles, patterns and bricks) so that changes that occur in any one domain can be understood and managed in terms of their effect on the other domains without causing the entire architecture to need to be re-written. For example, if a rigorous client/server pattern is put in place — an aspect of which is data management — one of the benefits would be that a specific database management system might be retired, and another one brought in to the architecture. This would be accomplished without major changes to the other elements of the entire architecture. Isolating logical technology models from physical implementations provides a level of flexibility. Another example would be isolating descriptions of business relationships to the business relationship grid, which provides one place to specify these descriptions. When these business relationships change, the effect on the overall architecture can be contained.
- Concentrate on the most-important pieces of the architecture. Put the 80/20 rule to work as you decide on which pieces of the architecture to build. Concentrate on the guidelines that really count in your organization. For example, providing interoperability and integration might be the highest priority of your architecture work, so concentrate there. Or, creating ease of customer access, or ease of information exchange might be priorities. In those cases, develop the key pieces of the architecture, from across Gartner's four-domain model, that are necessary for building out those

pieces. It is still important to have an overall vision for the architecture, but smaller pieces can be built to create positive impact in the short term.

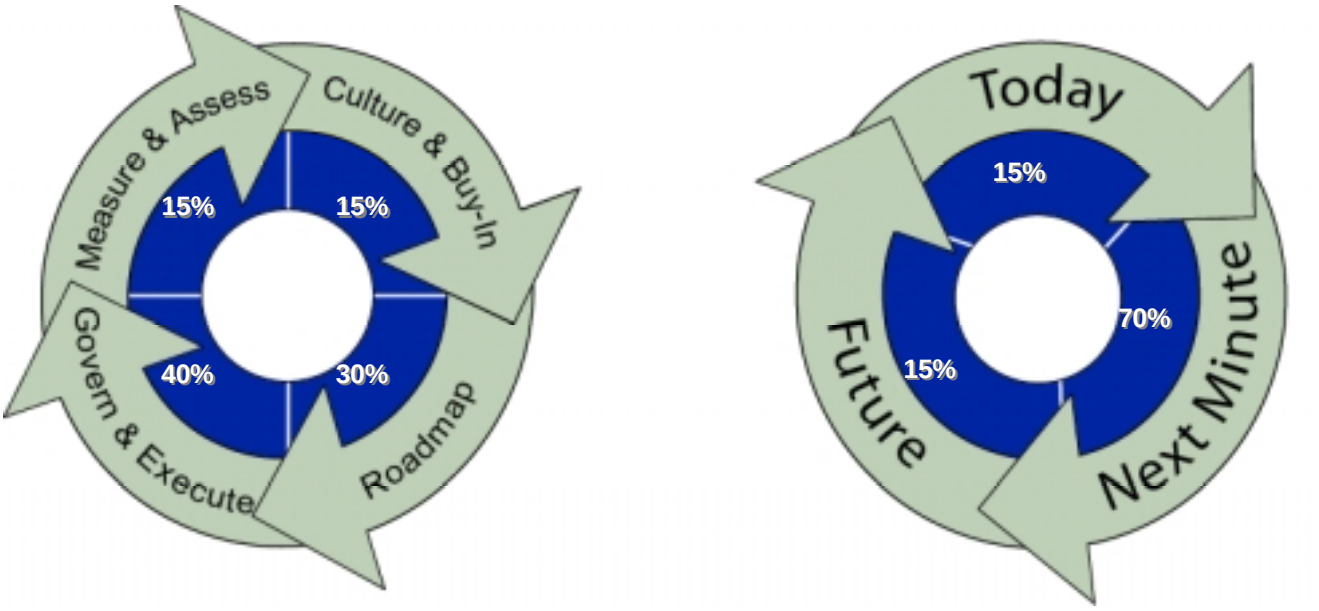
- Create an architecture that can be rapidly iterated. Good enough architecture is not bulletproof. Its underlying assumption is that it will need to be amended often. So, design an architecture that you know will be changed by building governance, organization structure and methods to ensure that it can be changed as often as necessary. Clearly, frequent changes in a single part of the architecture lose any real benefit because of excess churning; however, across the whole architecture, changes will be occurring regularly to suit evolving needs and opportunities.

There are other elements of a good enough architecture.

Time Domains That a Good Enough Architecture Should Cover

There are three time periods — today, next minute and the future (see Figure 1).

Figure 1
Time Periods of a Good Enough Architecture



Source: Gartner Research (June 2003)

From the perspective of level of effort, Gartner believes that 15 percent of effort needs to be rooted in the today architecture, 70 percent in the next minute and another 15 percent in the future. The today effort is involved in documenting and analyzing the architecture that now is in place. The activities include creating models of established systems, showing the linkage of those systems, and modeling established data and process flows. Although these steps can be satisfying in terms of cataloging established linkages, they provide little value from the standpoint of creating agility and organizational flexibility. These efforts usually result in the publication of "three-ring binder architectures," which end up sitting on the shelf mostly unused and untouched. Therefore, although we believe some level of cataloging effort is useful (to enable evaluation of what will be affected by a new system option), the time investment should be minimized.

The goal of future architecture is to align an enterprise's long-term IT strategy with long-term business strategy, generally a time frame of three or more years. Although this can be an important part of the architecture, future architectures at this level are usually full of generalizations because the future is unknowable in business and IT terms. For example, at the business level, we may be using statements

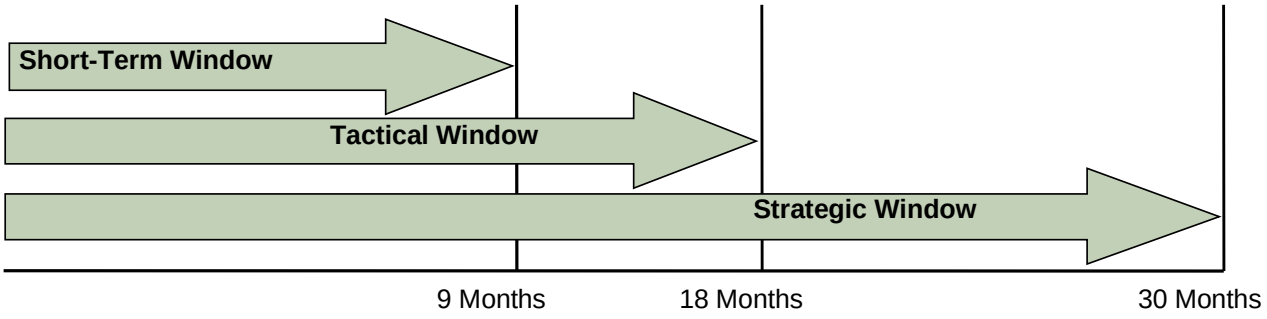
such as, "we want to dominate banking in the Western Hemisphere." Or, "We want to be the best air carrier in the world." Although these might be great long-term business visions, and provide some level of IT architectural guidance, they are too abstract to base an IT architecture on.

Gartner believes that a good enough architecture should be rooted in "next minute" and provide the guidelines, models, interfaces, definitions and protocols for immediate use in the design and integration of new systems. Like climbing a mountain, we have to be able to see the peak, but we don't climb aiming for the peak, we climb aiming for the next base camp. The base camp model not only gives us the opportunity to re-equip, but also to restrategize and reanalyze the approach we need to take to get to the top. Similarly, architectures need to use a base camp model because intermediate steps, in this case the next-minute architecture, provides a relatively short-term viewpoint. If architectures are created with agility as a foremost objective, they can be continually tuned to new business and technology opportunities. Getting these intermediate stages of architecture right, we believe, is more important than having a definitive end-goal — the mountain peak — clearly in sight.

There also is a second kind of timeline, the strategic window of opportunity — a nine-month tactical window, an 18-month rolling operating window and a 30-month strategic window (see Figure 2).

Figure 2

A Good Enough Architecture's Strategic Windows of Opportunity



Source: Gartner Research (June 2003)

Architecture projects must deliver essential value within the short-term, nine-month, period. The tactical window, should be a rolling 18 months, matching the next minute architecture. The strategic window should be no more than 30 months and match the enterprise's window for strategy.

The third metric comes from partitioning the level of effort of the life cycle of the phases in a good enough architecture. As shown in Figure 1, the management and governance phases of an architecture should be the largest categories, taking 40 percent of the entire architecture effort. Although poor technology choices sometimes cause an architecture to fail, usually we see architectures fail because of poor management and governance. Many architects believe that technology should be the largest focus of an architecture effort; however, we believe that it is too easy to get lost in technology, and the best technical architecture — or the architecture that most-carefully aligns business and technology — fails if not managed properly.

The most-important aspects of governance and manageability are:

- Determining and considering architectural maturity
- Exploring, understanding and communicating the business strategy
- Appropriately staffing and organizing the architecture team

- Lining up user organization participation
- Creating an "evergreen" philosophy and capability
- Bringing in architects with the right skills levels

We recommend that enterprises devote these amounts of time to the remaining efforts:

- Culture and buy-in should account for 15 percent of the total effort; these steps ensure that the proper setting for architecture is created and that an appropriate justification for architecture is rendered. Architecture justification should be based on significantly aligning with specific business key results areas. The enemy of architecture is generalization. Every element of an IT architecture needs to support a specific business goal, and must be able to be linked to that goal in measurable terms.
- The architecture road map itself, building the architecture, should take about 30 percent of the total effort. This is the construction of the phases and the documentation of the architecture.
- Measuring and assessing the architecture, in light of enterprise or competitive or industry standards and benchmarks, account for 15 percent of the total effort. These measurements provide the ability to see the results of the architecture effort, create a fine tuning of the architecture plan and then loop back to the beginning of the process again.

Bottom Line: "Good enough" architecture represents a more-pragmatic view as an approach to an overall architecture concept. The focus is on agility and changeability, with a rapid response to business and technology architecture. By considering the combination of time frame, window and level of effort, a good enough architecture can be created.